

# **Green Energy Program Participating Contractor Guidelines & Application**

**Delaware Department of Natural Resources and Environmental Control  
Delaware Energy Office  
1203 College Park Drive, Suite 101  
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## **1. Introduction**

The Delaware 142<sup>nd</sup> General Assembly enacted and Governor Minner signed into law Senate Bill 145 which amended Title 29 of the Delaware Code to include new provisions for utilizing the Green Energy Fund. The law continues to encourage and promote the use of renewable electric generation technologies and alternate energy technologies by residential and commercial customers in the Delaware Delmarva Power Delivery Service Territory. Further, the law amends §8054(d) by dividing the Green Energy Fund into three separate and distinct programs:

- a. Green Energy Program
- b. Technology Demonstration Program
- c. Research and Development Program

The Delaware 143rd General Assembly enacted and Governor Minner signed into law Senate Bill 74 which amended Title 26 of the Delaware Code relating to Renewable Energy Portfolio Standards (RPS) to include Special Provisions for Municipal Electric Companies and Rural Electric Cooperatives. The law provides that if Municipal Electric Companies and Rural Electric Cooperatives elect to be exempt from provisions in the RPS that they:

- (1) submit a written notice to the General Assembly;
- (2) alert their End-Use Customers with notices inserted in two consecutive electricity bills;
- (3) offer their retail customers a voluntary program for purchasing renewable energy under competitive rates; and
- (4) either contribute to the Green Energy Fund at levels commensurate with other Retail Electricity Suppliers or create an independent, self-administered fund separate from the Green Energy Fund to be used in support of energy efficiency technologies, renewable energy technologies, or demand side management programs, into which they make payments of \$0.178 for each megawatt-hour they sell, transmit, or distribute in this State.

This change now allows all Delawareans the opportunity to participate in a Green Energy Program. The Delaware Electric Cooperative began collecting funds and accepting application on June 1, 2006. Delaware Electric Cooperative customers who have already installed eligible renewable energy technologies listed in these guidelines will be retroactively eligible for grants to June 1, 2006. This means any installs occurring on or after June 1, 2006 will be eligible and installations before June 1, 2006 will not be eligible unless deemed qualified by Delaware Electric Cooperative.

Municipal Electric Companies began collecting funds on June 1, 2006 however have elected to wait until January 1, 2007 before accepting applications. Municipal Electric customers who have already installed eligible renewable energy technologies listed in these guidelines will be retroactively eligible for grants to January 1, 2007. This means any installs occurring on or after January 1, 2007 will be eligible and installations before January 1, 2007 will not be eligible unless deemed qualified by the Municipal Electric Company.

The contents of this document are specific to the Delmarva Power, Delaware Electric Cooperative and Municipal Electric Green Energy Programs.

### **1.1 Green Energy Program Overview**

Under authority of 29 Delaware Code, Section 8051 (d), the Green Energy Program shall provide cash grants from the Green Energy Fund to customers that have constructed, purchased or leased renewable energy technology and placed into service within the State of Delaware. The customers eligible to receive grants from the Green Energy Program must receive services from Delmarva Power Delivery, or its successor or from a non-regulated electric supplier which is contributing to the Green Energy Fund.

The Delaware Electric Cooperative Renewable Resource Program purpose is to prescribe procedures relating to the Renewable Resource Fund pursuant to 26 Del. C. Chapter 1, Subchapter III-A, §363 the Delaware Renewable Energy Portfolio Standards. It is the goal in establishing this policy to provide a streamlined procedure for distributing Renewable Resource Funds through the use of grants. This policy provides rules of practice and procedure for application and disbursement of Renewable Resource Fund grants to be used in support of energy efficiency technologies, Renewable energy technologies, or demand side management programs for and by member-owners of Delaware Electric Cooperative. Only renewable energy technologies will be considered in these guidelines. Any other uses of member funds will be addresses outside of these guidelines.

The Municipal Electric Program regulations will be available after January 1, 2007.

All grants made under the Delmarva Power Delivery customer Green Energy Program are on a first-come first-served basis and shall not exceed sixty-five percent (65%) of the total revenue collected during the previous fiscal year or sixty-five percent (65%) or the total fund whichever is greater. Under no circumstances will the Department issue grants for land acquisition in association with any project proposed in the Green Energy Program.

All grants made under the Renewable Resource Program are on a first come first-served basis. Funding is limited. Under no circumstances will grants be issued for land acquisition in association with any project proposed in the Renewable Resource Program.

Total annual funds available to the Renewable Resource Program shall be allocated as follows:

Energy Efficiency Technologies = 40%,

Renewable Energy Technologies = 40%,

Demand Side Management Programs = 20%.

Any allocation of resources not utilized in any particular program may be transferred to one of the two remaining programs.

All grants made under the Green Energy Program for Municipal Customers are on a first come first-served basis. Funding is limited. Under no circumstances will grants be issued for land acquisition in association with any project proposed in the Green Energy Program for Municipal Customers.

Total annual funds available to the Energy Program for Municipal Customers shall be allocated as need dictates in most municipalities. Since Municipalities have less funding than the Delmarva Power and Delaware Electric Cooperative Programs reserving funds is absolutely essential prior to installation. **By becoming a participating contractor you agree that you understand this fact.**

## 4.2 Eligibility

Of the total funds available through Green Energy Program on an annual basis, the grants made for residential projects shall not exceed 40% of the total funds available and the non-residential grants shall not exceed 60% of the total funds available.

Of the total funds available through Renewable Resource Program on an annual basis, the grants made for residential projects shall not exceed 60% of the total funds available and the non-residential grants shall not exceed 40% of the total funds available. However any such funding not utilized by either residential or non-residential may be transferred to the other.

Of the total funds available through Green Energy Program for Municipal Customers on an annual basis, the grants made for residential projects and the non-residential grants are not subject to percentage restrictions.

## 2.0 Green Energy Program Participation Guidelines

The Participating Contractor shall follow program guidelines to insure reservation of funds prior to installing a qualifying system.

### 2.1 Reservation Request Form

Customers and contractors applying for the grant must complete and provide the following information prior to installing the system:

- 2.1.1 Select a qualifying solar electric system (photovoltaic), solar water heating system, geothermal or wind turbine,
- 2.1.2 Complete, sign and submit the Reservation Request Form with all supporting documentation, which include:
- 2.1.3 Copy of project estimate, purchase order, or letter of intent
- 2.1.4 Copy of the customer's recent Power Delivery electric bill
- 2.1.5 System schematic or line drawing
- 2.1.6 Plot plan illustrating well, turbine, or module location
- 2.1.7 Manual J calculation (geothermal only)
- 2.1.8 Roof diagram illustrating the following

- 2.1.8.1 Roof dimensions (angle, length and width)
- 2.1.8.2 Orientation & Tilt of array or collectors
- 2.1.8.3 Areas of shading (Provide Solar Pathfinder results for all cases where shading occurs between 9:00 a.m. and 3:00 p.m.) Results of the solar shading analysis must determine that 70% of the annual solar path's area is shade free to be considered for a grant).
- 2.1.8.4 Location of collectors or modules on roof

## **2.2 Confirmation and Claim Form**

After installation, customer and contractor must provide the following where applicable:

- 2.2.1 Contractor shall provide customer with system orientation
- 2.2.2 Sign and date Confirmation and Claim Form
- 2.2.3 Copy of electrical or plumbing inspection
- 2.2.4 Copy of completed and approved Power Delivery Interconnection
- 2.2.5 Copy of building or well permit
- 2.2.6 Copy of product specification sheets
- 2.2.7 Copy of final sales invoice (invoice must include actual price paid, itemized list of components, labor, permit fees, method of payment)
- 2.2.8 Copy of warranty agreement
- 2.2.9 Copy of owner's manual (Front Cover Copy is Sufficient)
- 2.3.0 Original copy of W-9 Tax Form (**Delmarva Power Customers Only**)

Upon receipt of completed forms and documentation and final approval, the Delaware Energy Office will authorize / recommend grant payment.

The contractor and customer are fully responsible for insuring that all forms and documentation have been supplied and the system meets all program requirements.

## **3.0 Green Energy Program Contractor Guidelines**

### **3.1 Education and Licensure**

Participating Contractors shall maintain appropriate education and licenses to insure that only professionally designed systems are installed within the program.

### **3.2 Limitation of Funds**

The Program funds are limited. The Participating Contractor shall follow program guidelines to insure reservation of funds *prior* to installing a qualifying system.

### **3.3 Insurance Requirements**

The Participating Contractor and anyone acting under its direction or control or on its behalf shall at its own expense procure and maintain in full force at all times Commercial General Liability Insurance with a bodily injury and property damage combined single limit of liability of at least ONE MILLION DOLLARS (\$1,000,000) for any occurrence.

### **3.4 Statement of Reliability and Good Standing**

Contractor must be reliable and in good standing with a “Satisfactory Record” (or no negative reports) with the Better Business Bureau. Contractor may be asked to provide a copy of the Better Business Bureau report.

BBB of Delaware  
1415 Foulk Road, Suite 202  
Foulkstone Plaza  
Wilmington, DE 19803  
Phone: (302)230-0108  
Fax: (302)230-0116  
www: <http://www.delaware.bbb.org>  
Email: [info@delaware.bbb.org](mailto:info@delaware.bbb.org)

## **4.0 Green Energy Program Installation Guidelines**

### **4.1 Photovoltaic Systems**

#### **4.1.1 Grant Limits**

Subject to availability of funds, the Delaware Green Energy Program offers grants for photovoltaic systems installed by qualified contractors and customers up to 50% of the total installed cost not exceeding \$250,000 for commercial systems and \$22,500 for residential systems. A Photovoltaic system may not have Eligible Qualifying Photovoltaic System Costs in excess of \$12 per Watt.

Subject to availability of funds, the Delaware Electric Cooperative Renewable Resource Program offers grants for photovoltaic systems installed by qualified contractors and customers up to 50% of the total installed cost not exceeding \$30,000 for commercial systems and \$15,000 for residential systems. A Photovoltaic system may not have Eligible Qualifying Photovoltaic System Costs in excess of \$12 per Watt.

Subject to availability of funds, the Green Energy Program for Municipal Customers offers grants for photovoltaic systems installed by qualified contractors and customers up to 50% of the total installed cost not exceeding \$30,000 for commercial systems and \$15,000 for residential systems. A Photovoltaic system may not have Eligible Qualifying Photovoltaic System Costs in excess of \$12 per Watt.

#### **4.1.2 Accepted Products and Equipment**

##### **4.1.2.1 Grid Interconnected**

All photovoltaic modules must be certified by a nationally recognized testing laboratory as meeting the requirements of the most recent version of Underwriters Laboratory Standard 1703.

All qualifying grid-connected systems must comply with the Institute of Electrical and Electronic Engineers Standards Board (IEEE) 929, Recommended Practice

for Utility Interface of Photovoltaic (PV) Systems, IEEE 1547, Standard for Interconnecting Distributed Resources with the Electric Power Systems and the appropriate generation interconnection requirements of Delmarva Power Delivery and Delaware Electric Cooperative's, Technical Considerations Covering Parallel Operations of Customer Owned Generation.

All inverters must be certified by a nationally recognized testing laboratory for safe operation and be certified as meeting the requirements of Underwriters Laboratory Standards 1741, Standard for Static Inverters and Charge Controllers for Use in Photovoltaic Power Systems. All grid interconnected systems must be designed and installed to comply with the National Electric Code (NEC).

Many customers will be best served by selecting a packaged photovoltaic system that has been designed and engineered to insure components work well together. For a list of photovoltaic systems that meet the above criteria visit the Florida Solar Energy Center on the web at:

<http://www.fsec.ucf.edu/pvt/buyinstallpv/pvapprovals/approvals1.htm>

For a list of photovoltaic modules that meet the above criteria visit the California Energy Commission's California Emerging Renewable Buy-Down Program on the web at:

[http://www.consumerenergycenter.org/erprebate/eligible\\_pvmodules.html](http://www.consumerenergycenter.org/erprebate/eligible_pvmodules.html)

For a list of inverters that meet the above criteria visit the California Energy Commission's California Emerging Renewable Buy-Down Program on the web at:

[http://www.consumerenergycenter.org/erprebate/eligible\\_inverters.html](http://www.consumerenergycenter.org/erprebate/eligible_inverters.html)

#### **4.2.1.2 Non-Grid Interconnected or Stand-Alone**

All photovoltaic modules must be certified by a nationally recognized testing laboratory as meeting the requirements of the most recent version of Underwriters Laboratory Standard 1703.

All non-grid interconnected or stand-alone systems shall be designed and installed to comply with the National Electric Code (NEC).

#### **4.2.1.3 Array Orientation and Tilt**

Optimum array orientation is a 180° true bearing. However, the program accepts solar arrays oriented between South of due East and South of due West or between 80° and 260° magnetic. Systems installed between 260° and 80° magnetic or North of due East and North of due West are not eligible for a Green Energy Program Grant or Renewable Resource Grant or the Green Energy Program for Municipal Customers

Optimum array tilt is equal to the latitude at the installation site. However, the program accepts array tilt parameters as specified by the module manufacturer which may allow for tilts greater than and less than latitude.

#### **4.2.1.4 Array Shading**

Photovoltaic arrays shall be installed such that the array has a minimum of six (6) hours of unobstructed sunshine daily inclusive of solar noon. A "solar window" of eight (8) hours of unobstructed sunshine is preferred.

The installing contractor is responsible for insuring that the system is free from shading. The installing contractor shall perform a "Solar Shade Analysis" using the "SolarPathfinder™" or functionally similar device to ensure the array meets the minimum daily sunshine requirements. Results of the solar shade analysis must determine that 70% of the annual solar path's area is shade free to be considered for a grant.

#### **4.2.1.4 Aesthetics**

Aesthetics must be considered in the design and mounting of the photovoltaic array. The designing contractor must provide a roof schematic complete with roof dimensions, array placement, orientation and areas of shading to the Department prior to installation. The designing contractor must make every attempt to configure the modules in an aesthetically pleasing manner free from shading.

## **4.2 Solar Water Heating**

### **4.2.1 Grant Limits**

Subject to availability of funds, the Delaware Green Energy Program offers grants for solar water heating systems installed by qualified contractors and customers up to 50% of the total installed cost. Grants will not exceed \$3,000 per residential dwelling for residential systems and \$250,000 per non-residential facility for non-residential systems.

Solar water heating systems integrated into a radiant heating application are eligible for a grant up to 50 % of the installed cost of the solar energy portion of the system. Grants will not exceed \$5,000 per residential dwelling for residential systems and \$250,000 per non-residential dwelling for non-residential systems.

Subject to availability of funds, the Delaware Electric Cooperative Program offers grants for solar water heating systems installed by qualified contractors and customers up to 50% of the total installed cost. Grants will not exceed \$3,000 per residential dwelling for residential systems and \$10,000 per non-residential facility for non-residential systems.

Solar water heating systems integrated into a radiant heating application are eligible for a grant up to 50 % of the installed cost of the solar energy portion of the system. Grants will not exceed \$5,000 per residential dwelling for residential systems and \$10,000 per non-residential dwelling for non-residential systems.

Subject to availability of funds, the Green Energy Program for Municipal Customers offers grants for solar water heating systems installed by qualified contractors and customers up to 50% of the total installed cost. Grants will not exceed \$3,000 per residential dwelling for residential systems and \$10,000 per non-residential facility for non-residential systems.

Solar water heating systems integrated into a radiant heating application are eligible for a grant up to 50 % of the installed cost of the solar energy portion of the system. Grants will not exceed \$5,000 per residential dwelling for residential systems and \$10,000 per non-residential dwelling for non-residential systems.

#### **4.2.2 Accepted Products and Equipment**

A solar water heating system must be designed to reduce or eliminate the need for electric or gas heated water.

All qualifying residential solar water heating systems must be certified to meet the Solar Rating and Certification Corporation's (SRCC) OG- 300, Operating Guidelines and Minimum Standards for Certifying Solar Water Heating Systems: An Optional Solar Water Heating System Certification and Rating Program and have a Freeze Tolerance Limit of minus 21 degrees Fahrenheit without electrical power.

All qualifying non-residential solar water heating systems and solar energy systems integrated into a radiant heating application must utilize collectors certified to meet the Solar Rating and Certification Corporation's (SRCC) OG-100, Operating Guidelines for Certifying Solar Collectors.

Non-residential solar water heating systems will be required to submit a detailed system design and a predicted performance calculation verified by a Professional Engineer (P.E.)

The full list of OG-300 certified solar water heating system rating and can be found on the web by visiting:

[www.solar-rating.org/ratings/OG300DIRECTORIES/OG300DIRFULL\\_20031006.pdf](http://www.solar-rating.org/ratings/OG300DIRECTORIES/OG300DIRFULL_20031006.pdf)

For a list of OG-300 certified systems in Delaware, the Freeze Tolerance Limits and estimated annual energy savings visit:

[www.solar-rating.org/ratings/annuals/DE%20-%20WILMINGTON\\_20020530.PDF](http://www.solar-rating.org/ratings/annuals/DE%20-%20WILMINGTON_20020530.PDF)

All Qualifying Systems that are commercial solar water heating systems must utilize collectors certified to meet the Solar Rating and Certification Corporation's (SRCC) OG-100, Operating Guidelines for Certifying Solar Collectors. The list of OG-100 certified solar collector ratings visit:

[www.solar-rating.org/ratings/og100directories/OG100DIRFULL\\_20030611.pdf](http://www.solar-rating.org/ratings/og100directories/OG100DIRFULL_20030611.pdf)

Solar energy systems integrated into a radiant heating application must utilize collectors certified to meet the Solar Rating and Certification Corporation's (SRCC) OG-100, Operating Guidelines for Certifying Solar Collectors.

The list of OG-100 certified solar collector ratings visit:

[www.solar-rating.org/ratings/og100directories/OG100DIRFULL\\_20030611.pdf](http://www.solar-rating.org/ratings/og100directories/OG100DIRFULL_20030611.pdf)

#### **4.2.3 Collector Orientation and Tilt**

Optimum collector array orientation is a 180° true bearing. However, the program accepts solar collectors oriented between South of due East and South of due West or between 80° and 260° magnetic. Systems installed between 260° and 80° magnetic or North of due East and North of due West are not eligible for a Green Energy Program Grant.

Optimum collector tilt is equal to the latitude at the installation site. However, the program accepts collector tilt parameters as specified by the collector manufacturer which may allow for tilts greater than and less than latitude.

#### **4.2.4 Collector Shading**

All collectors shall be installed such that the collector array has a minimum of six (6) hours of unobstructed sunshine daily inclusive of solar noon. A "solar window" of eight (8) hours of unobstructed sunshine is preferred.

The installing contractor is responsible for insuring that the system is free from shading. The installing contractor shall perform a "Solar Shade Analysis" using the "SolarPathfinder™" or functionally similar device to ensure the array meets the minimum daily sunshine requirements. Results of the solar shade analysis must determine that 70% of the annual solar path's area is shade free to be considered for a grant.

#### **4.2.5 Aesthetics**

Aesthetics must be considered in the design and mounting of the solar water heating collectors. The designing contractor must complete a roof schematic complete with roof dimensions, collector placement, orientation and areas of shading to the Department prior to installation. The designing contractor must make every attempt to configure the collectors in an aesthetically pleasing manner.

### **4.3 Small Wind Turbines**

#### **4.3.1 Grant Limits**

Subject to availability of funds, the Delaware Green Energy Program offers incentives up to 50% of the total installed cost for small grid-connected wind turbines installed by a qualified contractor for a qualified customer. Small wind turbines shall be at least 500 Watts. Grants will not exceed \$22,500 per residential dwelling for residential systems and \$100,000 per non-residential facility for non-residential systems. A qualifying wind turbine system shall not exceed \$5.00 per Watt installed.

Subject to availability of funds, the Delaware Electric Cooperative Program offers incentives up to 50% of the total installed cost for small grid-connected wind turbines installed by a qualified contractor for a qualified customer. Small wind turbines shall be at least 500 Watts. Grants will not exceed \$15,000 per residential dwelling for residential systems and \$30,000 per non-residential facility for non-residential systems. A qualifying wind turbine system shall not exceed \$5.00 per Watt installed.

Subject to availability of funds and Municipal restrictions, the Green Energy Program for Municipal Customers offers incentives up to 50% of the total installed cost for small grid-connected wind turbines installed by a qualified contractor for a qualified customer. Small wind turbines shall be at least 500 Watts. Grants will not exceed \$15,000 per residential dwelling for residential systems and \$30,000 per non-residential facility for non-residential systems. A qualifying wind turbine system shall not exceed \$5.00 per Watt installed.

#### **4.3.2 Capacity Limits**

Qualifying wind turbine systems shall be at least 500 Watts.

The Department may reject applications if the location of the proposed wind turbine system has an inadequate wind resource for reasonable utilization of the equipment as recommended by the turbine manufacturer. Wind resources can vary significantly; therefore, the contractor and customer must take care that the location has adequate wind for the turbine selected. It is strongly recommended that a professional evaluation of your specific site be completed. The Department may require additional evidence of feasibility prior to approving the grant reservation.

For information on wind resources in Delaware, visit the U.S. Department of Energy's web site at:

[http://www.eere.energy.gov/windpoweringamerica/wpa/maps\\_template.asp?stateab=DE](http://www.eere.energy.gov/windpoweringamerica/wpa/maps_template.asp?stateab=DE)

Or visit the U.S. Department of Energy's National Renewable Energy web site for the Wind Energy Resource Atlas of the United States at:

<http://rredc.nrel.gov/wind/pubs/atlas/maps/chap3/3-28m.html>

#### **4.3.3 Accepted Products and Equipment**

##### **4.3.3.1 Grid Interconnected**

All qualifying grid-connected small wind systems must use Underwriters Laboratory listed equipment and comply with the Institute of Electrical and Electronic Engineers Standards Board (IEEE) 929, Recommended Practice for Utility Interface of Photovoltaic (PV) Systems, IEEE 1547, Standard for Interconnecting Distributed Resources with the Electric Power Systems and the appropriate generation interconnection requirements of Delmarva Power Delivery and Delaware Electric Cooperative's, Technical Considerations Covering Parallel Operations of Customer Owned Generation .

All inverters or other systems used in interconnection must be certified by a nationally recognized testing laboratory for safe operation and be certified as meeting the requirements of Underwriters Laboratory Standards 1741, Standard for Static Inverters and Charge Controllers for Use in Photovoltaic Power Systems.

All grid interconnected systems must be designed and installed to comply with the National Electric Code (NEC).

For a list of wind turbines that meet the above criteria visit the California Energy Commission's California Emerging Renewable Buy-Down Program on the World Wide Web at:

[http://www.consumerenergycenter.org/erprebate/eligible\\_smallwind.html](http://www.consumerenergycenter.org/erprebate/eligible_smallwind.html)

For a list of inverters that meet the above criteria visit the California Energy Commission's California Emerging Renewable Buy-Down Program web site at:

[http://www.consumerenergycenter.org/erprebate/eligible\\_inverters.html](http://www.consumerenergycenter.org/erprebate/eligible_inverters.html)

#### **4.3.3.2 Non-Grid Interconnected or Stand-Alone**

All qualifying non-grid interconnected wind systems must use Underwriters Laboratory certified listed equipment and systems shall be designed and installed to comply with the National Electric Code (NEC).

### **4.4 Geothermal Heat Pump Systems**

#### **4.4.1 Grant Limits**

Subject to availability of funds, the Delaware Green Energy Program offers grants for geothermal heat pump systems installed by qualified contractors and customers at the following rates:

Residential:

\$600 per ton not exceeding \$3,000 per residential dwelling for residential systems installed with an Energy Efficiency Ratio (EER) of 15.0 and Coefficient of Performance (COP) of 3.4 or greater or 50% of the installed cost whichever is lower, or

\$500 per ton not exceeding \$2500 per residential dwelling for residential systems with an Energy Efficiency Ratio (EER) of 14.0 and Coefficient of Performance (COP) of 3.0 or greater or 50% of the installed cost whichever is lower.

Non-residential:

\$600 per ton not exceeding \$25,000 per non-residential facility for non-residential systems with an Energy Efficiency Ratio (EER) of 15.0 and Coefficient of Performance (COP) of 3.4 or greater or 50% of the installed cost whichever is lower, or

\$500 per ton not exceeding \$25,000 per non-residential facility for non-residential systems with an Energy Efficiency Ratio (EER) of 14.0 and Coefficient of Performance (COP) of 3.0 or greater or 50% of the installed cost whichever is lower.

Subject to availability of funds, the Delaware Electric Cooperative Program offers grants for geothermal heat pump systems installed by qualified contractors and customers at the following rates:

**Residential:**

\$600 per ton not exceeding \$3,000 per residential dwelling for residential systems installed with an Energy Efficiency Ratio (EER) of 15.0 and Coefficient of Performance (COP) of 3.4 or greater or 50% of the installed cost whichever is lower, or

\$500 per ton not exceeding \$2500 per residential dwelling for residential systems with an Energy Efficiency Ratio (EER) of 14.0 and Coefficient of Performance (COP) of 3.0 or greater or 50% of the installed cost whichever is lower.

**Non-residential:**

\$600 per ton not exceeding \$20,000 per non-residential facility for non-residential systems with an Energy Efficiency Ratio (EER) of 15.0 and Coefficient of Performance (COP) of 3.4 or greater or 50% of the installed cost whichever is lower, or

\$500 per ton not exceeding \$20,000 per non-residential facility for non-residential systems with an Energy Efficiency Ratio (EER) of 14.0 and Coefficient of Performance (COP) of 3.0 or greater or 50% of the installed cost whichever is lower.

Subject to availability of funds, the Green Energy Program for Municipal Customers offers grants for geothermal heat pump systems installed by qualified contractors and customers at the following rates:

**Residential:**

\$600 per ton not exceeding \$3,000 per residential dwelling for residential systems installed with an Energy Efficiency Ratio (EER) of 15.0 and Coefficient of Performance (COP) of 3.4 or greater or 50% of the installed cost whichever is lower, or

\$500 per ton not exceeding \$2500 per residential dwelling for residential systems with an Energy Efficiency Ratio (EER) of 14.0 and Coefficient of Performance (COP) of 3.0 or greater or 50% of the installed cost whichever is lower.

**Non-residential:**

\$600 per ton not exceeding \$20,000 per non-residential facility for non-residential systems with an Energy Efficiency Ratio (EER) of 15.0 and Coefficient of Performance (COP) of 3.4 or greater or 50% of the installed cost whichever is lower, or

\$500 per ton not exceeding \$20,000 per non-residential facility for non-residential systems with an Energy Efficiency Ratio (EER) of 14.0 and Coefficient of Performance (COP) of 3.0 or greater or 50% of the installed cost whichever is lower.  
Green Energy Program for Municipal Customers

#### **4.4.2 Accepted Products and Equipment**

Qualifying geothermal heat pump systems must be sized in accordance with good heating, ventilation and air conditioning design practices for the occupancy, location and structure. Contractor shall provide a Manual J calculation, or other equivalent calculation, to determine proper size of equipment.

All qualifying systems must have a warranty for protection of the integrity and performance of the system for at least five years. All units installed under this program must have a minimum EER of 14.0 and COP of 3.0. Qualifying systems must meet the following:

Closed loop systems shall qualify under rating conditions in accordance with ISO 13256-1.

Open loop systems shall qualify under rating conditions in accordance with ISO 13256-1.

DX systems shall qualify under rating conditions in accordance with ARI 870.

For a list of systems that meet the above requirements visit the Environmental Protection Agency's Energy Star Program on the World Wide Web at:

[http://www.energystar.gov/ia/products/prod\\_lists/geo\\_heat\\_prod\\_list.xls](http://www.energystar.gov/ia/products/prod_lists/geo_heat_prod_list.xls)

### **4.5 Fuel Cells**

#### **4.5.1 Grant Limits**

Subject to availability of funds, the Delaware Green Energy Program offers grants for grid-connected fuel cells installed by qualified contractors and customers up to 50% of the total installed cost for fuel cell systems operating on a renewable fuel source. Grants will not exceed \$22,500 for residential systems and \$250,000 for non-residential systems.

Subject to availability of funds, the Delaware Electric Cooperative Program offers grants for grid-connected fuel cells installed by qualified contractors and customers up to 50% of the total installed cost for fuel cell systems operating on a renewable fuel source. Grants will not exceed \$15,000 for residential systems and \$30,000 for non-residential systems.

Subject to availability of funds, the Green Energy Program for Municipal Customers offers grants for grid-connected fuel cells installed by qualified contractors and customers up to 50% of the total installed cost for fuel cell systems operating on a renewable fuel source. Grants will not exceed \$15,000 for residential systems and \$30,000 for non-residential systems.

## **4.5.2 Accepted Products and Equipment**

### **4.5.2.1 Grid Interconnected**

All Qualifying fuel cells systems must utilize a renewable fuel source and meet the National Fire Protection Association (NFPA) 853 for Stationary Fuel Cell Power Plants, the Institute of Electrical and Electronic Engineers Standards Board (IEEE) 519-Recommended Practices and Requirements for Harmonic Control in Electric Power Systems, the most current version of the American National Standards Institute (ANSI) Z21.83 for Fuel Cell Power Plants, and input and output protection functions should be in compliance with ANSI C37.2 Device Function Number Specifications.

All grid interconnected systems must be designed and installed to comply with the National Electric Code (NEC).

### **4.5.2.2 Non-Grid Interconnected or Stand-Alone**

All non-grid interconnected or stand-alone systems shall be designed and installed to comply with the National Electric Code (NEC).

## **4.6 Code Compliance**

All qualifying systems must be installed in accordance with the standards and specifications of the manufacturers of the components in the system and in compliance with all applicable local electric and building codes, local ordinances and these Guidelines prior to installation. Where discrepancies, if any, exist with these Guidelines and local codes, local codes shall govern.

New Castle County Licensing and Permitting Division  
<http://www.co.new-castle.de.us/LandUse/LandUse2.htm>

Kent County Inspections & Enforcement Division  
<http://www.co.kent.de.us/PlanningDivision/iande/index.html>

Sussex County Planning & Permit Requirements  
[http://www.sussexcounty.net/depts/assessment/buildcode/planning\\_\\_permits.html](http://www.sussexcounty.net/depts/assessment/buildcode/planning__permits.html)

Delaware Department of Natural Resources and Environmental Control Permits  
<http://www.dnrec.state.de.us/water2000/Sections/WatSupp/WellPermits/MonitorWellGuidelines.htm>

## **4.7 Owner's Manual Minimum Requirements**

Contractors are required to provide each Program participant with an owner's manual. At a minimum, the owner's manual shall include the following:

- 4.7.1 Name and address of the seller
- 4.7.2 System model name or number
- 4.7.3 Identification and explanation of system components
- 4.7.4 Description of system operation

- 4.7.5 Description of system maintenance
- 4.7.6 Description of emergency procedures
- 4.7.7 Vacation procedures
- 4.7.8 Systems warranty

#### **4.8 Warranty**

All qualifying systems receiving a Green Energy Program grant must have a full 5-year warranty against component failure, malfunction and premature output degradation. The warranty must cover all components for which the program incentive is granted and cover the full cost of repair and replacement of all components of the system. For professionally installed systems, the warranty must cover the labor to remove and replace defective components and systems.

# **5.0 Green Energy Program Participating Contractor Application Form**

**Delaware Department of Natural Resources and Environmental Control  
Delaware Energy Office  
1203 College Park Drive, Suite 101  
Dover, DE 19904**



**July 2008**

## 5.0 Participating Contractor Application



Please complete, sign and submit for consideration as a Delaware Program Participating Contractor.

### A. Contractor – Installer Information

Company Name: \_\_\_\_\_

Contact: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

Website: \_\_\_\_\_

☐ Contractor Social Security Number or ☐ Federal Tax ID Number \_\_\_\_\_

#### Licensure

License	Date Effective	License Number
Delaware Business License ( <b>Copy Required</b> )		
Professional Electrician License (Copy Required if applicable)		
Professional Plumbing License (Copy Required if applicable)		
Professional HVAC License (Copy Required if applicable)		

**B. Company Information**

B-1: Principal Product(s) Offered by Firm:

- ☐ Photovoltaic
- ☐ Solar Water Heating
- ☐ Wind
- ☐ Geothermal
- ☐ Fuel Cell

B-2: Principal Sector:

- ☐ Distributor
- ☐ Manufacturer
- ☐ Residential Installation
- ☐ Commercial Installation

B-3: Brief History and Organizational Structure of Firm

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Number of Years in Business: \_\_\_\_\_

Current Number of Employees: \_\_\_\_\_

Referring to section B1 how many systems have you installed in the last three years?

\_\_\_\_\_

How many systems do you currently service? \_\_\_\_\_

**C. Education, Experience and Licensure**

C-1: Referring to section B1. List the installation training and/or certification programs you have attended: Attach a copy of all certificates or other proof of training and examination.

Renewable Energy System Training Program(s)	Dates Attended	Passed Exam (Yes, No, or n/a)


C-2: Date and location of the three most recently installed renewable energy systems

Location, City, State	Type System	Date Installed

C-3: Provide three customer references and their renewable energy system descriptions that the State of Delaware is authorized to contact.

Customer Name, Address, Phone	System Description & Size

**D: Statement of Commitment, Conduct and Legitimacy**

- ☐ I certify, that I am a contractor in good standing and have a “Satisfactory Record” with the Better Business Bureau.
- ☐ I certify, that I maintain \$1 million General Liability Insurance Policy. (Attach insurance binder.)
- ☐ I certify, that I maintain a Worker’s Compensation Insurance Policy (only for contractors that employ installers, laborers, salespeople, administrators, etc.)

- ☐ I certify, that I have read the Participating Contractor Guidelines, and if approved to be a participating contractor will follow the guidelines outlined in this document.
- ☐ I will comply with federal, state, and local statutes, regulations and public ordinances of any nature governing the work.
- ☐ I will obtain and maintain all required permits and licenses.
- ☐ I will pay all applicable sales, consumer, use and other similar taxes required by law.
- ☐ I meet all the program eligibility requirements and agree to abide by all laws, rules, and regulations applicable to program participation.
- ☐ I will provide a full 5-year system warranty.

#### **E. Signature**

I certify, under penalty of perjury, that all the information provided above is true and correct. I agree to comply with the Guidelines above and all regulations pertinent to the Program. I hereby apply to be a Participating Contractor in the Delaware Green Energy Program.

Signature \_\_\_\_\_ Date: \_\_\_\_\_  
**Applicant**

#### **Required Attachments:**

**Copy of all certificates or other proof of training and examination**  
**Copy of Delaware Business licenses**  
**Copy of Professional Licenses**  
**Copy of General Liability Insurance and Statutory Worker's Compensation**  
**Failure to supply these documents will result in a delay of approval**

Please mail this completed form and all required attachments to:

**Delaware Energy Office**  
**Scott V. Lynch, Green Energy Program Planner**  
**1203 College Park Drive, Suite 101**  
**Dover, DE 19904**

**\*All new startup companies without references or job history must at least have proper training in order to install systems under any of the Green Energy Programs. Your company will not be listed on the Delaware Energy Office website until at least (3) installations have been completed to provide your references. These installations may not include any installs at your company's business or for company employees.\***

**\*\*Upon Approval your company will be required to have an application procedure meeting with the Delaware Energy Office to discuss how to effectively submit applications. \*\***